WHAT IS CLAIMED IS:

1. A method for detecting the presence of mycobacteria other than tuberculosis (MOTT) comprising:

(a) obtaining a sample containing nucleic acids;

(b) amplifying nucleic acid present in said sample using primers having the nucleic acid sequence of SEQ. ID. NO.:3 and SEQ. ID. NO.:4; and

(c) detecting amplified nucleic acid products produced in step (b) thereby detecting MOTT in said sample.

2. The method of claim 1, wherein said sample is selected from the group consisting of archival tissues, bronchial washes, sputum and blood.

3. The method of claim 1, wherein said nucleic acid is selected from the group consisting of DNA, RNA and mRNA.

4. The method of claim 1, wherein said MOTT is selected from the group consisting of *M. avium, M. intracellularre, M. gordonae, M. simiae, M. kansaii, M. malmiennse, M. gastri, M. marimum, M. scrofulaceum, M. asiaticum,* and *M. szulgai.*

5. A method for detecting the presence of *Mycobacteria chelonae* comprising:

(a) obtaining a sample containing nucleic acids;

(b) amplifying nucleic acid present in said sample using primers having the nucleic acid sequence of SEQ. ID. NO.:5 and SEQ. ID. NO.:6; and

(c) detecting amplified nucleic acid products produced in step (b) thereby detecting *Mycobacteria chelonae* in said sample.

6. The method of claim 5, wherein said sample is selected from the group consisting of archival tissues, bronchial washes, sputum and blood.

7. The method of claim 5, wherein said nucleic acid is selected from the group consisting of DNA, RNA and mRNA.

8. A method for detecting and differentiating the presence of mycobacteria tuberculosis (MTB) and MOTT comprising:

(a) obtaining a sample containing nucleic acids;

(b) amplifying nucleic acid present in said sample using two primer sets comprising a first primer set and a second primer set wherein

(i) said first primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:1 and SEQ. ID. NO.:2; and

(ii) said second primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:3 and SEQ. ID. NO.:4;

(c) separating said nucleic acid products amplified from step (b);

(d) detecting amplified nucleic acid products produced in step (b) having approximately 180 bp thereby indicating the presence of MTB in said sample; and

(e) detecting amplified nucleic acid products produced in step (b) having approximately 130 bp thereby indicating the presence of MOTT in said sample.

9. The method of claim 8, wherein said biological sample is selected from the group consisting of archival tissues, bronchial washes, sputum and blood.

10. The method of claim 8, wherein said nucleic acid is selected from the group consisting of DNA, RNA and mRNA.

11. The method of claim 8, wherein said MOTT is selected from the group consisting of *M. avium, M. intracellularre, M. gordonae, M. simiae, M. kansaii, M. malmiennse, M. gastri, M. marimum, M. scrofulaceum, M. asiaticum,* and *M. szulgai.*

12. The method of claim 8, wherein said separating step consists of electrophoresis and chromatography.

13. A method for detecting and differentiating the presence of mycobacteria tuberculosis (MTB) and MOTT comprising:

(a) obtaining a sample containing nucleic acids;

(b) amplifying nucleic acid present in said sample using two primer sets comprising a first primer set and a second primer set wherein

(i) said first primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:1 and SEQ. ID. NO.:2; and

(ii) said second primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:3 and SEQ. ID. NO.:4;

wherein each primer set is labeled with a different label;

(c) separating said nucleic acid products amplified from step (b);

(d) detecting incorporation of labeled primers from step (b)(i) thereby indicating the presence of MTB in said sample; and

(e) detecting incorporation of labeled primers from step (b)(ii) thereby indicating the presence of MOTT in said sample.

14. The method of claim 13, wherein said biological sample is selected from the group consisting of archival tissues, bronchial washes, sputum and blood.

15. The method of claim 13, wherein said nucleic acid is selected from the group consisting of DNA, RNA and mRNA.

16. The method of claim 13, wherein said MOTT is selected from the group consisting of *M. avium, M. intracellularre, M. gordonae, M. simiae, M. kansaii, M. malmiennse, M. gastri, M. marimum, M. scrofulaceum, M. asiaticum,* and *M. szulgai.*

17. The method of claim 13, wherein said separating step consists of electrophoresis and chromatography.

18. The method of claim 13, wherein said label is selected from the group consisting of radioactive, enzymatic, fluorescent, biotinylated and chemiluminescent labels.

19. A method for distinguishing species of MOTT comprising:

(a) obtaining a sample containing nucleic acids;

(b) amplifying nucleic acid present in said sample using two primer sets comprising a first primer set and a second primer set wherein

(i) said first primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:3 and SEQ. ID. NO.:4; and

(ii) said second primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:5 and SEQ. ID. NO.:6;

(c) separating said nucleic acid products amplified from step (b);

(d) detecting amplified nucleic acid products produced in step (b) having approximately 130 bp thereby indicating the presence of MOTT in said sample; and

(e) detecting amplified nucleic acid products produced in step (b) having approximately 190 bp thereby indicating the presence of *Mycobacteria chelonae* in said sample.

20. The method of claim 19, wherein said sample is selected from the group consisting of archival tissues, bronchial washes, sputum and blood.

21. The method of claim 19, wherein said nucleic acid is selected from the group consisting of DNA, RNA and mRNA.

22. The method of claim 19, wherein said MOTT is selected from the group consisting of *M. avium, M. intracellularre, M. gordonae, M. simiae, M. kansaii, M. malmiennse, M. gastri, M. marimum, M. scrofulaceum, M. asiaticum,* and *M. szulgai.*

23. The method of claim 19, wherein said separating step consists of electrophoresis and chromatography.

24. A method for detecting and differentiating the presence of MOTT species comprising:

(a) obtaining a sample containing nucleic acids;

(b) amplifying nucleic acid present in said sample using two primer sets comprising a first primer set and a second primer set wherein

(i) said first primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:3 and SEQ. ID. NO.:4; and

(ii) said second primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:5 and SEQ. ID. NO.:6;

wherein each primer set is labeled with a different label;

(c) separating said nucleic acid products amplified from step (b);

(d) detecting incorporation of labeled primers from step (b)(i) thereby indicating the presence of MOTT in said sample; and

(e) detecting incorporation of labeled primers from step (b)(ii) thereby indicating the presence of *Mycobacteria chelonae* in said sample.

25. The method of claim 24, wherein said sample is selected from the group consisting of archival tissues, bronchial washes, sputum and blood

26. The method of claim 24, wherein said nucleic acid is selected from the group consisting of DNA, RNA and mRNA.

27. The method of claim 24, wherein said MOTT is selected from the group consisting of *M. avium, M. intracellularre, M. gordonae, M. simiae, M. kansaii, M. malmiennse, M. gastri, M. marimum, M. scrofulaceum, M. asiaticum,* and *M. szulgai.*

28. The method of claim 24, wherein said separating step consists of electrophoresis and chromatography.

29. The method of claim 24, wherein said label is selected from the group consisting of radioactive, enzymatic, fluorescent, biotinylated and chemiluminescent labels.

30. A method for detecting and differentiating the presence of MTB and *Mycobacteria chelonae* in a biological sample comprising:

(a) obtaining a sample containing nucleic acids;

(b) amplifying nucleic acid present in said sample using two primer sets comprising a first primer set and a second primer set wherein

(i) said first primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:1 and SEQ. ID. NO.:2; and

(ii) said second primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:5 and SEQ. ID. NO.:6;

wherein each primer set is labeled with a different label;

(c) separating said nucleic acid products amplified from step (b);

(d) detecting incorporation of labeled primers from step (b)(i) thereby indicating the presence of MTB in said sample; and

(e) detecting incorporation of labeled primers from step (b)(ii) thereby indicating the presence of *Mycobacteria chelonae* in said sample.

31. The method of claim 30, wherein said sample is selected from the group consisting of archival tissues, bronchial washes, sputum and blood.

32. The method of claim 30, wherein said nucleic acid is selected from the group consisting of DNA, RNA and mRNA.

33. The method of claim 30, wherein said MOTT is selected from the group consisting of *M. avium, M. intracellularre, M. gordonae, M. simiae, M. kansaii, M. malmiennse, M. gastri, M. marimum, M. scrofulaceum, M. asiaticum,* and *M. szulgai.*

34. The method of claim 30, wherein said separating step consists of electrophoresis and chromatography.

35. The method of claim 30, wherein said label is selected from the group consisting of radioactive, enzymatic, fluorescent, biotinylated and chemiluminescent labels.

36. A method for detecting and differentiating the presence of MTB, MOTT and *Mycobacteria chelonae* comprising:

(a) obtaining a sample containing nucleic acids;

(b) amplifying nucleic acid present in said sample using three primer sets comprising a first primer set; a second primer set; and a third primer set wherein

(i) said first primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:1 and SEQ. ID. NO.:2;

(ii) said second primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:3 and SEQ. ID. NO.:4; and

(iii) said third primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:5 and SEQ. ID. NO.:6

wherein each primer set is labeled with a different label;

(c) separating said nucleic acid products amplified from step (b);

(d) detecting incorporation of labeled primers from step (b)(i) thereby indicating the presence of MTB in said sample;

(e) detecting incorporation of labeled primers from step (b)(ii) thereby indicating the presence of MOTT in said sample; and

(f) detecting incorporation of labeled primers from step (b)(iii) thereby indicating the presence of *Mycobacteria chelonae* in said sample.

37. The method of claim 36, wherein said sample is selected from the group consisting of archival tissues, bronchial washes, sputum and blood.

38. The method of claim 36, wherein said nucleic acid is selected from the group consisting of DNA, RNA and mRNA.

39. The method of claim 36, wherein said MOTT is selected from the group consisting of *M. avium, M. intracellularre, M. gordonae, M. simiae, M. kansaii, M. malmiennse, M. gastri, M. marimum, M. scrofulaceum, M. asiaticum,* and *M. szulgai.*

40. The method of claim 36, wherein said separating step consists of electrophoresis and chromatography.

41. The method of claim 36, wherein said label is selected from the group consisting of radioactive, enzymatic, fluorescent, biotinylated and chemiluminescent labels.

42. A kit for detecting MOTT and MTB nucleic acid, wherein said kit comprises:

(a) a container means comprising two primers sets wherein first primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:1 and SEQ. ID. NO.:2; and second primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:3 and SEQ. ID. NO.:4, wherein each primer set is labeled with different detectable labels; and

(b) a reagent for detecting said labels.

43. A kit for detecting MOTT and *Mycobacteria chelonae* nucleic acid, wherein said kit comprises:

(a) a container means comprising two primers sets wherein first primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:3 and SEQ. ID. NO.:4; and second primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:5 and SEQ. ID. NO.:6, wherein each primer set is labeled with different detectable labels; and

(b) a reagent for detecting said labels.

44. A kit for detecting MTB and *Mycobacteria chelonae* nucleic acid, wherein said kit comprises:

(a) a container means comprising two primers sets wherein first primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:1 and SEQ. ID. NO.:2; and second primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:5 and SEQ. ID. NO.:6, wherein each primer set is labeled with different detectable labels; and

(b) a reagent for detecting said labels.

45. A kit for detecting MTB, MOTT and *Mycobacteria chelonae*, wherein said kit comprises:

(a) a container means comprising three primers sets wherein first primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:1 and SEQ. ID. NO.:2; second primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:3 and SEQ. ID. NO.:4; and third primer set comprises primers having the nucleic acid sequence of SEQ. ID. NO.:5 and SEQ. ID. NO.:6, wherein each primer set is labeled with different detectable labels; and

(b) a reagent for detecting said labels.

46. The kit of claim 42, 43, 44 or 45, wherein said detectable label is selected from the group consisting of enzymatic, fluorescent, biotinylated and chemiluminescent labels.